Name – Rajiv Harlalka Roll – 20MA20073 OT LAB 1 Submission

1. Basic Feasible Solutions:  
- (0,0) => z=2\*0+5\*0=0

- (0,6) => z=2\*0+5\*6=30

- (7,0) => z=2\*7+5\*0=14

- (4,5) => z=4\*2+5\*5=33

- (6,3) => z=4\*6+3\*5=39

MAX of z of all Solutions= 39

2. Basic Feasible Solutions:

- (0,0,0) => z=0

- (0,0,156.667) => z=4\*0+3\*0+6\*156.667 = 940

- (0,86,0) => z= 4\*0+86\*3+0\*0 = 258

- (0,42.222,156.667) => 4\*0+42.222\*3+6\*156.667 = 1066.6686

- (0,86,91) = 4\*0+3\*86+91\*6=804

- (117.5,0,0) = 4\*117.5+3\*0+ 6\*0=470

- (117.5,39,0) = 117.5\*4+3\*39+6\*0 = 587

- (70.3571,57.8571,62.8571) = 70.3571\*4+57.8571\*3+62.8571\*6 = 832.1423

MAX of z of all solutions = 1066.6686

3. Basic Feasible Solutions:

- (0,0,0) => z=12\*0+15\*0+14\*0 = 0

- (100,0,0) => z=12\*100+15\*0+14\*0= 1200

- (50,50,0) => z=12\*50+15\*50+14\*0= 1350

- (40,40,20) => z= 12\*40+15\*40+14\*20 = 1360

MAX of all solutions = 1360

4. Basic Feasible Solution:

- (0,0,0) => z=1\*0-3\*0+3\*0=0

- (0,0,1.25)=> z=1\*0-3\*0+1.25\*3=3.75

- (0,3.3333,0) => z=1\*0-3\*3.3333+1.25\*0= -10

- (2.3333,0,0) => z=1\*2.333-3\*0+3\*0=2.333

- (1.125,0,1.8125) => z=1.125-3\*0+1.8125\*3 = 6.5625

- (6.2,11.6,0) => 6.2-3\*11.6+3\*0 = -28.6

MIN of all solutions = -28.6

5. Basic Feasible Solutions:

- (0,1,0) => z=3\*0+2\*1+2\*0 = 2

- (0,0.75,0) => z= 3\*0+0.75\*2+2\*0=1.5

- ( 0, 0.931034, 0.12069) => z= 3\*0+2\*0.931034+2\*0.12069 = 2.103448

- ( 1, 0.285714, 0) => z=3\*1+2\*0.285714+2\*0 = 3.571428

- ( 0.783784, 0.162162, 0) => z= 0.783784\*3+2\*0.162162+2\*0 = 2.675676

- ( 1.01536, 0.195777, 0.138196) => z=3\*1.01536+0.195777\*2+0.138196\*2 = 3.714026

MAX of all solutions = 3.714026